

SEQUENCE LISTING

<110> XIANG, JINHUA
WÜNSCHMANN, SABINA
SCHMIDT, WARREN
STAPLETON, JACK T.

<120> FULL-LENGTH GB VIRUS C (HEPATITIS G VIRUS) RNA TRANSCRIPTS ARE INFECTIOUS
IN PRIMARY CD4 POSITIVE T CELLS

<130> IOWA:030US

<140> UNKNOWN

<141> 2001-04-05

<140> 60/253,390

<141> 2000-11-27

<150> 60/195,597

<151> 2000-04-06

<160> 2

<170> PatentIn Ver. 2.1

<210> 1

<211> 9395

<212> DNA

<213> Hepatitis G virus

<400> 1

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<212> PRT

<213> Hepatitis G virus

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Trp Ala Gly Lys Cys Met Gly Pro Pro Ser Ser Ala Ala Ala Cys Ser
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Arg Gly Ser Pro Arg Ile Leu Arg Val Arg Ala Gly Gly Ile Ser Leu
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Phe Tyr Thr Ile Met Ala Val Leu Leu Leu Leu Leu Val Val Glu Ala
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Gly Ala Ile Leu Ala Pro Ala Thr His Ala Cys Arg Ala Asn Gly Gln
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Tyr Phe Leu Thr Asn Cys Cys Ala Pro Glu Asp Ile Gly Phe Cys Leu
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Glu Gly Gly Cys Leu Val Ala Leu Gly Cys Thr Val Cys Thr Asp Arg
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Cys Trp Pro Leu Tyr Gln Ala Gly Leu Ala Val Arg Pro Gly Lys Ser
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Val Ser Ala Tyr Val Ala Gly Ile Leu Gly Leu Gly Glu Val Tyr Ser
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Pro Asn Leu Lys Cys Ala Val Glu Cys Asp Val Lys Trp Gly Ser Glu
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Phe Trp Arg Trp Thr Glu Gln Leu Ala Ser Asn Tyr Trp Ile Leu Glu
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Tyr Leu Trp Lys Val Pro Phe Glu Phe Trp Arg Gly Val Met Ser Leu
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Thr Pro Leu Leu Val Trp Val Ala Ala Leu Leu Leu Leu Glu Gln Arg
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Ile Val Met Val Phe Leu Leu Val Thr Met Ala Gly Met Leu Gln Gly
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Ala Pro Ala Ser Val Leu Gly Ser Arg Pro Phe Asp Tyr Gly Leu Lys
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Trp Gln Ser Cys Ser Cys Arg Ala Asn Gly Ser Arg Ile Pro Thr Gly
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Glu Arg Val Trp Asp Arg Gly Asn Val Thr Leu Leu Cys Asp Cys Pro
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Asn Gly Pro Trp Val Trp Val Pro Ala Phe Cys Gln Ala Val Gly Trp
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Gly Asp Pro Ile Thr His Trp Ser His Gly Gln Asn Gln Trp Pro Leu
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Ser Cys Pro Gln Tyr Val Tyr Gly Ser Val Ser Val Thr Cys Val Trp
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Gly Ser Val Ser Trp Phe Ala Ser Thr Gly Gly Arg Asp Ser Lys Ile
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Asp Val Trp Ser Leu Val Pro Val Gly Ser Ala Ser Cys Thr Ile Ala
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Pro Phe His Arg Cys Gly Thr Gly Pro Arg Leu Thr Lys Asp Leu Glu
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 690 695 700
 Lys Leu Ala Arg Gly Ala Phe Pro Leu Ala Leu Leu Met Gly Ile Ser
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 Ala Thr Arg Gly Arg Thr Ser Val Leu Gly Ala Glu Phe Cys Phe Asp
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 Val Thr Phe Glu Val Asp Thr Ser Val Leu Gly Trp Val Val Ala Ser
 740 745 750
 Val Val Ala Trp Ala Ile Ala Leu Leu Ser Ser Met Ser Ala Gly Gly
 755 760 765
 Trp Lys His Lys Ala Val Ile Tyr Arg Thr Trp Cys Lys Gly Tyr Gln
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Asp	Ala	Val	Met	Met	Val	Val	Val	Ala	Leu	Val	Leu	Leu	Phe	Gly	Leu	820	825	830	
Phe	Asp	Ala	Leu	Asp	Trp	Ala	Leu	Glu	Glu	Leu	Leu	Val	Ser	Arg	Pro	835	840	845	
Ser	Leu	Arg	Arg	Leu	Ala	Arg	Val	Val	Glu	Cys	Cys	Val	Met	Ala	Gly	850	855	860	
Glu	Lys	Ala	Thr	Thr	Ile	Arg	Leu	Val	Ser	Lys	Met	Cys	Ala	Arg	Gly	865	870	875	880
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Ala	Leu	Cys	His	Gly	Leu	Ser	Lys	Gly	Asp	Lys	Val	Glu	Leu	Asp	Val	1075	1080	1085	

Ala Met Glu Val Ser Asp Phe Arg Gly Ser Ser Gly Ser Pro Val Leu
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Cys Asp Lys Gly His Ala Val Arg Met Leu Val Ser Val Leu His Ser
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Gly Gly Arg Val Thr Ala Ala Arg Phe Thr Arg Pro Trp Thr Gln Val
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Pro Thr Asp Ala Lys Thr Thr Thr Glu Pro Pro Pro Val Pro Ala Lys
 1140 1145 1150

Gly Val Phe Lys Glu Ala Pro Leu Phe Met Pro Thr Gly Ala Gly Lys
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Ser Thr Arg Val Pro Leu Glu Tyr Gly Asn Met Gly His Lys Val Leu
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Ile Leu Asn Pro Ser Val Ala Thr Val Arg Ala Met Gly Pro Tyr Met
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Glu Arg Leu Ala Gly Lys His Pro Ser Ile Tyr Cys Gly His Asp Thr
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Thr Ala Phe Thr Arg Ile Thr Asp Ser Pro Leu Thr Tyr Ser Thr Tyr
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Gly Arg Phe Leu Ala Asn Pro Arg Gln Met Leu Arg Gly Val Ser Val
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Val Ile Cys Asp Glu Cys His Ser His Asp Ser Thr Val Leu Leu Gly
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Ile Gly Arg Val Arg Glu Leu Ala Arg Gly Cys Gly Val Gln Leu Val
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Leu Tyr Ala Thr Ala Thr Pro Pro Gly Ser Pro Met Thr Gln His Pro
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Ser Ile Ile Glu Thr Lys Leu Asp Val Gly Glu Ile Pro Phe Tyr Gly
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His Gly Ile Pro Leu Glu Arg Met Arg Thr Gly Arg His Leu Val Phe
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Cys His Ser Lys Ala Glu Cys Glu Arg Leu Ala Gly Gln Phe Ser Ala
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Arg Gly Val Asn Ala Ile Ala Tyr Tyr Arg Gly Lys Asp Ser Ser Ile
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Gly Tyr Thr Gly Asn Phe Asp Ser Val Thr Asp Cys Gly Leu Val Val
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Glu Glu Val Val Glu Val Thr Leu Asp Pro Thr Ile Thr Ile Ser Leu
1395 1400 1405

Arg Thr Val Pro Ala Ser Ala Glu Leu Ser Met Gln Arg Arg Gly Arg
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His Pro Asp Val Ser Trp Ala Lys Val Arg Gly Val Asn Trp Pro Phe
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Leu Val Gly Val Gln Arg Thr Met Cys Arg Glu Thr Leu Ser Pro Gly
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His His Ile Val Asp Asp Leu Val Arg Arg Leu Gly Val Ala Glu Gly
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Tyr Val Arg Cys Asp Ala Gly Pro Ile Leu Met Val Gly Leu Ala Ile
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Thr Asp Trp Asp Val Lys Gly Gly Gly Ser Pro Leu Tyr Arg His Gly
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Val Asn Ala Ala Ser Leu Val Phe Asp Phe Met Ala Gly Lys Leu Ser
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Ser Glu Asp Leu Trp Tyr Ala Ile Pro Val Leu Thr Ser Pro Gly Ala
1845 1850 1855

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1860 1865 1870

Ser Gly Thr Thr Thr Trp Leu Asn Arg Leu Leu Thr Thr Leu Pro Arg
1875 1880 1885

Ser Ser Cys Ile Pro Asp Ser Tyr Phe Gln Gln Ala Asp Tyr Cys Asp
1890 1895 1900

Lys Val Ser Ala Val Leu Arg Arg Leu Ser Leu Thr Arg Thr Val Val
1905 1910 1915 1920

Ala Leu Val Asn Arg Glu Pro Lys Val Asp Glu Val Gln Val Gly Tyr
1925 1930 1935

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1940 1945 1950

Ala Arg Leu Arg Ala Leu Cys Pro Val Val Ser Leu Pro Leu Trp His
1955 1960 1965

Cys Gly Glu Gly Trp Ser Gly Glu Trp Leu Leu Asp Gly His Val Glu
1970 1975 1980

Ser Arg Cys Leu Cys Gly Cys Val Ile Thr Gly Asp Val Leu Asn Gly
1985 1990 1995 2000

Gln Leu Lys Asp Pro Val Tyr Ser Thr Lys Leu Cys Arg His Tyr Trp
 2005 2010 2015
 Met Gly Thr Val Pro Val Asn Met Leu Gly Tyr Gly Glu Thr Ser Pro
 2020 2025 2030
 Leu Leu Ala Ser Asp Thr Pro Lys Val Val Pro Phe Gly Thr Ser Gly
 2035 2040 2045
 Trp Ala Glu Val Val Val Thr Pro Thr His Val Val Ile Arg Arg Thr
 2050 2055 2060
 Ser Ala Tyr Lys Leu Leu Arg Gln Gln Ile Leu Ser Ala Ala Val Ala
 2065 2070 2075 2080
 Glu Pro Tyr Tyr Val Asp Gly Ile Pro Val Ser Trp Asp Ala Asp Ala
 2085 2090 2095
 Arg Ala Pro Ala Met Val Tyr Gly Pro Gly Gln Ser Val Thr Ile Asp
 2100 2105 2110
 Gly Glu Arg Tyr Thr Leu Pro His Gln Leu Arg Leu Arg Asn Val Ala
 2115 2120 2125
 Pro Ser Glu Val Ser Ser Glu Val Ser Ile Asp Ile Gly Thr Glu Thr
 2130 2135 2140
 Glu Asp Ser Glu Leu Thr Glu Ala Asp Leu Pro Pro Ala Ala Ala Ala
 2145 2150 2155 2160
 Leu Gln Ala Ile Glu Asn Ala Ala Arg Ile Leu Glu Pro His Ile Asp
 2165 2170 2175
 Val Ile Met Glu Asp Cys Ser Thr Pro Ser Leu Cys Gly Ser Ser Arg
 2180 2185 2190
 Glu Met Pro Val Trp Gly Glu Asp Ile Pro Arg Thr Pro Ser Pro Ala
 2195 2200 2205
 Leu Ile Ser Val Thr Glu Ser Ser Pro Asp Glu Lys Thr Pro Ser Val
 2210 2215 2220
 Ser Ser Ser Gln Glu Asp Thr Pro Ser Ser Asp Ser Phe Glu Val Ile
 2225 2230 2235 2240
 Gln Glu Ser Glu Thr Ala Glu Gly Glu Glu Ser Val Phe Asn Val Ala
 2245 2250 2255
 Leu Ser Val Leu Lys Ala Leu Phe Pro Gln Ser Asp Ala Thr Arg Lys
 2260 2265 2270
 Leu Thr Val Lys Met Ser Cys Cys Val Glu Lys Ser Val Thr Arg Phe
 2275 2280 2285
 Phe Ser Leu Gly Leu Thr Val Ala Asp Val Ala Ser Leu Cys Glu Met
 2290 2295 2300

Glu Ile Gln Asn His Thr Ala Tyr Cys Asp Lys Val Arg Thr Pro Leu
 2305 2310 2315 2320

Glu Leu Gln Val Gly Cys Leu Val Gly Asn Glu Leu Thr Phe Glu Cys
 2325 2330 2335

Asp Lys Cys Glu Ala Arg Gln Glu Thr Leu Ala Ser Phe Ser Tyr Ile
 2340 2345 2350

Trp Ser Gly Val Pro Leu Thr Arg Ala Thr Pro Ala Lys Pro Pro Val
 2355 2360 2365

Val Arg Pro Val Gly Ser Leu Leu Val Ala Asp Thr Thr Lys Val Tyr
 2370 2375 2380

Val Thr Asn Pro Asp Asn Val Gly Arg Arg Val Asp Lys Val Thr Phe
 2385 2390 2395 2400

Trp Arg Ala Pro Arg Val His Asp Lys Phe Leu Val Asp Ser Ile Glu
 2405 2410 2415

Arg Ala Lys Arg Ala Ala Gln Ala Cys Leu Ser Met Gly Tyr Thr Tyr
 2420 2425 2430

Glu Glu Ala Ile Arg Thr Val Arg Pro His Ala Ala Met Gly Trp Gly
 2435 2440 2445

Ser Lys Val Ser Val Lys Asp Leu Ala Thr Pro Ala Gly Lys Met Ala
 2450 2455 2460

Val His Asp Arg Leu Gln Glu Ile Leu Glu Gly Thr Pro Val Pro Phe
 2465 2470 2475 2480

Thr Leu Thr Val Lys Lys Glu Val Phe Phe Lys Asp Arg Lys Glu Glu
 2485 2490 2495

Lys Ala Pro Arg Leu Ile Val Phe Pro Pro Leu Asp Phe Arg Ile Ala
 2500 2505 2510

Glu Lys Leu Ile Leu Gly Asp Pro Gly Arg Val Ala Lys Ala Val Leu
 2515 2520 2525

Gly Gly Ala Tyr Ala Phe Gln Tyr Thr Pro Asn Gln Arg Ile Arg Glu
 2530 2535 2540

Met Leu Lys Leu Trp Glu Ser Lys Lys Thr Pro Cys Ala Ile Cys Val
 2545 2550 2555 2560

Asp Ala Thr Cys Phe Asp Ser Ser Ile Thr Glu Glu Asp Val Ala Leu
 2565 2570 2575

Glu Thr Glu Leu Tyr Ala Leu Ala Ser Asp His Pro Glu Trp Val Arg
 2580 2585 2590

Ala Leu Gly Lys Tyr Tyr Ala Ser Gly Thr Met Val Thr Pro Glu Gly
 2595 2600 2605

Val Pro Val Gly Glu Arg Tyr Cys Arg Ser Ser Gly Val Leu Thr Thr
2610 2615 2620

Ser Ala Ser Asn Cys Leu Thr Cys Tyr Ile Lys Val Lys Ala Ala Cys
2625 2630 2635 2640

Glu Arg Val Gly Leu Lys Asn Val Ser Leu Leu Ile Ala Gly Asp Asp
2645 2650 2655

Cys Leu Ile Ile Cys Glu Arg Pro Val Cys Asp Pro Ser Asp Ala Leu
2660 2665 2670

Gly Arg Ala Leu Ala Ser Tyr Gly Tyr Ala Cys Glu Pro Ser Tyr His
2675 2680 2685

Ala Ser Leu Asp Thr Ala Pro Phe Cys Ser Thr Trp Leu Ala Glu Cys
2690 2695 2700

Asn Ala Asp Gly Lys Arg His Phe Phe Leu Thr Thr Asp Phe Arg Arg
2705 2710 2715 2720

Pro Leu Ala Arg Met Ser Ser Glu Tyr Ser Asp Pro Met Ala Ser Ala
2725 2730 2735

Ile Gly Tyr Ile Leu Leu Tyr Pro Trp His Pro Ile Thr Arg Trp Val
2740 2745 2750

Ile Ile Pro His Val Leu Thr Cys Ala Phe Arg Gly Gly Gly Thr Pro
2755 2760 2765

Ser Asp Pro Val Trp Cys Gln Val His Gly Asn Tyr Tyr Lys Phe Pro
2770 2775 2780

Leu Asp Lys Leu Pro Asn Ile Ile Val Ala Leu His Gly Pro Ala Ala
2785 2790 2795 2800

Leu Arg Val Thr Ala Asp Thr Thr Lys Thr Lys Met Glu Ala Gly Lys
2805 2810 2815

Val Leu Ser Asp Leu Lys Leu Pro Gly Leu Ala Val His Arg Lys Lys
2820 2825 2830

Ala Gly Ala Leu Arg Thr Arg Met Leu Arg Ser Arg Gly Trp Ala Glu
2835 2840 2845

Leu Ala Arg Gly Leu Leu Trp Arg Pro Gly Leu Arg Leu Pro Pro Pro
2850 2855 2860

Glu Ile Ala Gly Ile Pro Gly Gly Phe Pro Leu Ser Pro Pro Tyr Met
2865 2870 2875 2880

Gly Val Val His Gln Leu Asp Phe Thr Ser Gln Arg Ser Arg Trp Arg
2885 2890 2895

Trp Leu Gly Phe Leu Ala Leu Leu Ile Val Ala Leu Phe Gly
2900 2905 2910

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